Annual Meeting: Announcement.

The Second Annual Meeting of the Society for Social Studies of Science will be held at Harvard University, Cambridge, MA on 15-16 October 1977.

The program will include invited speakers, special sessions, and contributed papers. Persons who wish to report on research in progress (15 minute presentations) or to offer full reports of research results or other scholarly contributions (30 minute presentations) should send notice of these to the AS Newsletter, c/o Lowell Borgen, Department of Sociology, Indiana University, Bloomington, IN 47405. The Committee will refer materials received to appropriate specialty referees. It is planned to have some parallel sessions giving opportunity for comments by designated discussants, and for discussion among those attending. Contributions will be made available in printed Proceedings of the meeting.

The Program Committee, consisting at this time of Lowell Borgen (Indiana University), Dorothy Nelkin (Cornell University), Hal Nestivo (Massachusetts Institute of Technology), Dorothy Sloborg (Harvard University), and Warren Hagstrom (University of Wisconsin) expects that such topics as scientific communication, development, and bibliometrics, will be well represented at the first meeting, will be well represented again. The Committee is heading the advice of Collins, Geysz, and Nelkin (AS Newsletter, Winter 1977) and others and is soliciting contributions on topics not so well represented at this time, such as sociological history of science, science policy, science and technology in developing nations, the economics of research and development, and contributions from relevant areas of anthropology, psychology, and philosophy. Further details on the program will be presented in the next issue of the Newsletter. Suggestions about special sessions, invited speakers, and meeting organization are welcomed by the Program Committee. Letters may be addressed to any member of the Committee but should be sent to them soon.

The Local Arrangements Committee is chaired by Dorothy Sloborg of Harvard University, Program in Science and International Affairs, Cambridge, MA 02138. Details on accommodation and travel will be presented in the next issue of the AS Newsletter.

Election of Council Member: The Nominations Committee (Jerry Gaston, Melvin Polksley, Brigitte Schroeder-Gubisch, Harriet Zuckerman, and chaired by President Hagstrom) has submitted the following slate for five positions on the Council. Three positions are to replace Nicholas Mullins, Derek de Solla Price, and Harold Tinchley, whose terms expire this year. Two positions are new, as provided by the Charter amendment approved at the 1976 annual meeting and submitted to the full membership at this time. Four positions are for terms of two years, the fifth for a term of one year. The four candidates receiving the most votes will be elected for two year terms, the one with the fifth most votes for a one year term. (In the unlikely event that the Charter amendment is defeated, the three candidates with the most votes will be elected to two year terms.) The NALP appear on the center pages. Please mark and detach it, then return in an envelope bearing your name and return address (this is to verify voting eligibility) to Robert McPhail at Cornell University. THE DEADLINE FOR RECEIPT OF ALL BALLOTS IS 15 June 1977.
Council Meeting: The 43rd Council met on 8 February 1977 in Philadelphia, Pennsylvania. The Secretary-Treasurer has submitted the following summary of reports and resolutions:


I. Minutes of the 3 November 1976 meeting of Council were approved.

II. Secretary-Treasurer’s Report:
   A. As of 1 January 1977, 40 had 539 members.
   B. As of 1 January 1977, the society had a balance of $4,523.31 and an anticipated total income of $6,391.00, including renewal and credits.
   C. Between September 1975 and the end of 1976, the society had expended $2,530.98.
   D. A budget of $5,228 was approved for calendar year 1977.
   E. Council accepted with gratitude a gift of $200 from Computer Horizons, Inc., which now becomes a Sponsoring Institution.
   F. The Secretary-Treasurer was directed to write to the Federation of American Scientists regarding a subscription and a note in the newsletter.
   G. Council approved a commitment of $500 for local arrangements for the 1977 Annual Meeting and recognized an anticipated need for an additional $1,000. These funds would be recovered from registration fees.

III. Report of the Committee on Annual Meetings:
   A. The 1977 meeting will be held at MIT, Cambridge, Massachusetts in late October, 1977. Dorothy Zimberg has agreed to chair the local Arrangements Committee.
   B. The 1978 and 1979 meetings will be held in Washington, DC and Montreal, in that order, unless 1978 proved to be more desirable from the Montreal delegation’s perspective. Subvention will be sought for both meetings.
   C. Council agreed to concentrate a recruitment drive in the Boston area in anticipation of the 1977 meeting.

IV. Report from President Magatran:
   A. Nominations and Program Committees are being formed. They will reflect the multidisciplinary character of NS.

Council Meeting (Continued).

B. It was agreed to instruct the Nominations Committee that the phrase “at least one nominee” (Chapter Clause II, b.3) should be interpreted to mean that two candidates shall be sought for each available position. The positions to be filled are those now occupied by Council members Mullins, Price and Thackray, whose terms expire in October 1977.

V. Publications
   A. Arnold Thackray announced that he should have to resign editorship of the Newsletter and Chairmanship of the Publications Committee (effective 30 June 1977) due to an impending sabbatical leave to be spent abroad. Council expressed its great appreciation on behalf of the Newsletter and Publications Committee for his excellent service.
   B. A letter of resignation (effective 30 June 1977) was received from Managing Editor Daryl Chabin. Council reluctantly accepted the letter and expressed its deep appreciation for his substantial contribution to NS.
   C. Council member Jerry Gantos was appointed to chair the Publications Committee effective upon the resignation of Arnold Thackray and to serve at the pleasure of Council.
   D. Council agreed that Gantos and Thackray should be authorized to negotiate with candidates for the positions of Senior Editor and Managing Editor, on behalf of the Council. Council further agreed on the importance of maintaining a balance of disciplinary expertise in the editorial structure.
   E. It was agreed that a continuing, evolutionary development of the NS Newsletter represented the widest course for the Society (see Publications Committee, below). At the same time, discussion of possible relationships is continuing with the editors of several journals, including Social Studies of Science, Minerva and Newsletter on Science, Technology & Values.

F. Council agreed that, in the interests of all NS members, the Society should express its willingness to provide whatever possible assistance the editors of Minerva and Social Studies of Science might seek and to maintain its cordial relations with these excellent journals.

VI. Other Business:
   A. Derek de Galla Price reported that the AAAS Committee on Affiliation has approved the request that NS become an affiliate member. Final action will be taken by AAAS Council during the Annual Meeting on 22 February (see AAAS Affiliation, below).
Nominations Committee. The Nominations Committee requested the Council to consider providing some guidelines for Charter revisions. The Charter currently requires that a list of nominees be presented at least six months in advance of the annual meeting; this seems unnecessarily long. The Charter makes no provision for nomination by petition or write-in votes. It gives the President full authority to select a Nominations Committee. The Nominations Committee has discretion to use a variety of forms for balloting for Council positions, from a single ballot (as on this occasion) to separate ballots for each open position (as in our previous election). Finally, the first two Nominations Committees chose to nominate only persons who could attend Council meetings at their own expense. This has tended to restrict nominees to those in North America or even Eastern North America. Procedures might be considered that would give those residing elsewhere a more formal voice in the governance of the Society.

-43- Affiliated With AAAS. The Council of the American Association for the Advancement of Science approved the affiliation of 49 at its meeting of 23 February in Denver. Ordinarily the AAAS accepts organizations as affiliates only if they have been in existence at least five years, but this requirement was waived for 49. Affiliation will enable 49 to organize sessions at AAAS meetings and to appoint representatives in its section committee. 49 is now enrolled in Section X, General, but expects to cooperate with other sections as well. The 49 Council has informed AAAS of its intention to sponsor a session on "Science Indicators" at the AAAS meeting in Washington, DC, 12-13 February 1978.

THOUGHT AND OPINION
Councillor's Commentary
Nicholas C. Muller
Indiana University

Social studies of science is a designation that includes interesting intellectual work and the authors of that work which current social arrangements do not bring together. The name is also a cologne that reflects an interest in reaching as wide as possible a collection of those who do social studies of a science, without defining that too precisely.

The inner logic of the subject matter or the current social arrangements do not support 49. There are other activities, both personal and professional, with much higher immediate rewards. Support for 49 is an investment in institution building. I feel that my work has been improved by contact with a wide range of scholars, and that the social arrangements which suggest that kind of contact on a regular basis must be made by those who find them valuable.

49 in social arrangement that supports meetings, a newsletter and a journal which are all themselves arrangements that have served to notify scholars of one another's existence and to help bring them together. 49 also acts as all societies do to define an area and to give it a character. It is my hope that the process of definition does not draw the boundaries too close—either intellectually or geographically. I intend to work for a broadly based scientific society inclusive of a large range of work and persons.

Council Meeting (Continued).

B. Council agreed that it would be appropriate for 49 to take responsibility for a Kaplan Memorial Fund, the earned income from which would be used to provide a periodic award for distinguished contributions to social studies of science. Council agreed that emphasis should be placed on the contribution of younger scholars.

C. Council agreed that, in light of the budget report, it would be necessary to continue the practice of requiring members to meet their own expenses for travel to Council meetings.

D. The next meeting of the Council was set for Friday, 13 May 1977, at the University of Pennsylvania.

Publications Committee. The Publications Committee has been engaged in a wide polling of opinion, concerning the wisest course of action for 49. The main issues include the statement in the Newsletter (volume 1, number 4, pp. 3-4), the open meeting at Cornell in November and the subsequent published report (Newsletter volume 2, number 1, pp. 18-19) and the questions sent out to Council, editorial advisors and other members of the Society with special knowledge of or concern in the publications area. Informal discussions and correspondence with editors of journals and other newsletters have also helped to clarify the options. As reported in Council Minutes the clear consensus is that:

a. A newsletter format best suits the present needs of the Society.

b. 49 will continue to seek good collegial relations with other journals and newsletters in the field, including reduced subscription arrangements for members of the Society.

c. There is a strong sentiment in favor of having the Newsletter continue on its pathway of cautious evolution. While the common hope is that 49 may eventually be able to sponsor an independent journal, timing of any such development must depend on the maturity of the Society, the identity of suitable sponsors and the broader economic situation.

d. The Publications Committee will keep a watching brief in these matters. Participation in a joint inter-society newsletter remains a live option, as does participation in a joint venture with some other journal.

The Publications Committee of the Society remains committed to two aims. The first is to be a good neighbor to cognate journals in such fields as economic history, history of science, history of technology, philosophy of science, political science, science policy and sociology. The second is to find the proper forms through which 49 may "help to convert an impressing congeries of disparate programs of research on science into an even more impressive composite field of disciplined inquiry." Those forms must surely include publications, as befits a fledgling but determined newcomer to the ranks of learned societies.
On 45

Harold Orlans
National Academy of Public Administration Foundation
Washington, DC

My interest in studying scientific affairs was aroused during five years on the staff of the National Science Foundation and gratified during thirteen years at the Brookings Institution. That interest rooted on graduate work in anthropology, an interest in the sociology and politics of knowledge and the professions, an aversion to intellectual pretension, and a disposition, common in Washington, to note the motives underlying supposedly disinterested actions. (Daniel Raymond relates how, upon hearing that a certain minister had dropped dead of a heart attack, Metternich asked, "Now, what was his motive?) The efforts of scientists to obtain more knowledge, money, acclaim, and power do not necessarily accord with the public's interest in obtaining essential, but not excessive or excessively costly, knowledge, and in a broad distribution of knowledge and its benefits. Many scholars of science accept the inflated view that scientists often have of their own importance. Science is important, but as is carpentry, industry, music, farming, and garbage collection; none can claim primacy for universal, objective, and exclusive character of the subject, none can claim the high status that the participation in its activities be available to interested people in all countries of the world. As a principle, the content of this resolution is not self-evident that its proclamation appears almost superfluous. Indeed if science is to a large extent universal, objective, and exclusive, the science of science is more so, and hence it is quite evident that participation in the study of science should be equally available to interested and contributing people regardless of where in the world they happen to have been born or wherever they reside.

A new society resembles a new baby; all hope and weak splinters. The opportunity to sort things out, to identify and weed monstrous, accompanies an opportunity to attract new members and define the character of a new fraternity. We are most fortunate in the circumstances that have brought together historians and sociologists of science. American social science has been long divorced from history; a reunion can strengthen both fields.

I would like to see at least three contingents more strongly represented in 45:

1. Political scientists and students of public administration (e.g., Robert Gilpin, Don Nash, Sanford Lakoff, Henry Lambright, Don Price, Harvey Sapolsky, Eugene Blackford, Bruce Smith, Christopher Wright).

2. Spokesmen for and administrators of scientific institutions and associations (e.g., Philip Abelson, Harvey Brooks, William Farr, Philip Handler, Caryn Bensky, Charles Kidd, Gerald Plia, Frederick Sevitt, Chauncey Starr, Alan Weinberg).

3. Staff of governmental science programs (such as those of the Energy Research and Development Administration, the National Institutes of Health, and the National Science Foundation) and of Congressional committees and agencies (such as the Congressional Research Service and the Office of Technology Assessment).

The importance of these roles in the context of international participation will be immediately apparent to science scientists. As a principle, the content of this resolution is not self-evident that its proclamation appears almost superfluous. Indeed if science is to a large extent universal, objective, and exclusive, the science of science is more so, and hence it is quite evident that participation in the study of science should be equally available to interested and contributing people regardless of where in the world they happen to have been born or wherever they reside.

On 46 (Continued)

At the first annual meeting of 45, the following motion was passed: "It is in the strong desire of this society that the participation in its activities be available to interested people in all countries of the world." As a principle, the content of this resolution is not self-evident that its proclamation appears almost superfluous. Indeed if science is to a large extent universal, objective, and exclusive, the science of science is more so, and hence it is quite evident that participation in the study of science should be equally available to interested and contributing people regardless of where in the world they happen to have been born or wherever they reside.

As a matter of practice, however, it is not so evident that without some attention to this will participation automatically be available to anybody anywhere. The point simply is that many factors playing important roles in shaping worldwide interactions are in fact not international in spirit, and hence equality cannot be assumed to exist if matters are left completely to their own devices, to wander along paths of least resistance.

As an example, and because of my continued interest in this direction, I would like to discuss briefly the situation with respect to potential participants from so-called developing countries. There will probably be little dissent from my assertion that since these countries are in the process of building up their science "from scratch," whereas the United States, Germany, or Japan (and a number of other countries) now have very large bodies of scientific infrastructure, the developing countries are likely to benefit even more from the insights that are to become available. While it is true that the scientifically advanced countries. What, then, are the obstacles in the path of an equitable opportunity for participation by the developing countries?

At the present, the primary, or perhaps even sole, role of 45 lies in professional communications of various sorts. We have a newsletter and might become involved in professional journals; we organize meetings and offer opportunities for informal interaction between people with overlapping interests in science studies. To our question should be: Assuming laissez-faire, do international interactions from developing countries have equal opportunity to participate in these modes of professional communication within 45?
The Internationality of NS (Continued)

The answer is clearly no for the obvious reasons that cause a general disparity in all patterns of scientific communication. The Matthew principle, well known in R&D circles, works with particular vengeance in scientific communication, as I have elaborated previously on numerous occasions. Journals are expensive, must be subscribed to in hard currency, and travel slowly to far-away places. Proprietary science is bought preferentially by groups who already have a good reputation in the field, and to whose posture is cheap, thereby eliminating most groups or individuals in developing countries. Notices of meetings are circulated much more efficiently within the "advanced" community with well-identified and concentrated manpower (which, in any case, has much better access to "the grapevine" of professional news and rumors). Meetings themselves are likely to be held in geographical areas with a high concentration of potential participants and with existing and proven facilities to host meetings, thus again placing developing countries at a disadvantage. Furthermore, meetings held in Europe or North America also mean that travel costs are maximized for precisely those whose travel funds are minimal and whose hard currency restrictions are the most severe.

Finally, channels of informal communication are also the sparsest in the developing countries. Visitors are relatively infrequent, postal and telephone connections comparatively weak, and the overall tradition of professional interaction, even domestically or regionally, is at best in a nascent stage.

It is not my aim to discuss whether these causes for the disparity at the cost of developing countries are justified or not, or whether they can, in the short run, be eliminated or not, although such a discussion might be rewarding in itself. At the moment, I prefer to opt for a simpler alternative: given the above state of affairs -- whether one could take some steps to try to reduce some semblance of equality among those interested in science studies in various parts of the world.

Such steps can be divided into two groups: measures which require mainly a bit of thought and effort, but practically no money; and steps which involve non-negligible, out-of-pocket financing.

Among the first, we come immediately to matters of publicity. I believe that NS should launch a strenuous effort to make its existence known in developing countries. Free publicity in those countries could be obtained through negotiations with local journals like Science, Nature, and Scientific American, and also through the use of letters to the editor of local newspapers. The latter should be assigned to editors of prominent science journals in the developing countries, and should be published in the same language as the local newspapers. The former should be assigned to editors of prominent science journals in the United States, and should be published in English.

In the second group of measures, we would need to involve non-negligible financial resources, and it is clear to me that, at present, our flexible society cannot even think of channeling some of its own modest resources into such financing. However, after all, the society's total assets are of the order of a few thousand dollars, and the participation of one person from, say, 500 would amount to something like $5,000. Thus outside funds are the only source.

In order to encourage such outside funding, however, NS can be effective in various ways. Among these are that, during the course of their normal correspondence with them. Such publicity material should also offer a procedure for joining NS which takes into account

1. See M.J. Muravenec, Science Development - The Building of Science in Less Developed Countries, Pergamon, Oxford, 1976, Chapter 4 and many references given in it.
2. It is likely that most of those in the developing countries who are interested in science studies will come from a background in the natural sciences.
The Internationally of of (Continued). a search is likely to be more successful if it becomes widely known that the Society is indeed eager for such participation and that its activities do benefit substantially those who are involved in science building in developing countries.

I do not believe that any of this requires, at the present, any formal action by the Society or any formal suborganization within the Society. The existing decision-making bodies and individuals are likely to be sufficiently sensitive to the requirements of this issue, and other members actively interested in it can communicate with each other through our Newsletter or privately, ideas, suggestions, and comments about this topic from individual members will be very much appreciated, and can be directed to the President, to any of the Society's officers, or to me as an interested member.

Conference on Retrospective Technology Assessment

Ruth Schwartz Cowen, SUNY, Stony Brook
Tessa D. Miller, Northern Illinois University
Roberta Miller, Social Science Research Council

Carnegie-Mellon University, in cooperation with the National Science Foundation, sponsored a conference on Retrospective Technology Assessment on 1-4 December 1976, at Seven Springs Mountain Resort in Champion, Pennsylvania. The conference was chaired by Joel R. Tarr, Director of the Program on Science, Technology, and Humanities at Carnegie-Mellon, and the keynote address was delivered by Daniel De Simone, Deputy Director of the Office of Technology Assessment. Conference participants came from the academic community, government agencies, and the contract research community.

The term "technology assessment" was coined ten years ago by Enrico Daddario, then a member of the House of Representatives, who held hearings on the process of changing technology in society resulting from technological innovation. He used the term to describe studies of the intended and unintended effects of such changes. In order to make technological assessments available for public policy considerations, the Technology Assessment Act was signed into law in October 1972, and the Office of Technology Assessment was established in January 1974, to provide technological assessments to the Congress.

One of the purposes of technology assessment is to anticipate the direct and indirect -- as well as the intended and unintended -- impacts of the introduction of a new technology on society. In order to study processes of technologically introduced change over time, the National Science Foundation sponsored four studies which became called retrospective technology assessments. These were historical studies of new technologies and their effects on society. Not truly retrospective in the sense of examining historical data from one point in time to an earlier point in time, these studies were, instead, prospective examinations of historical events from an earlier to a later date. It was felt that the long time period afforded by historical studies could show more about the range of intended and unintended effects of technology than is possible with contemporary technology assessments which simply monitor the ongoing consequences of new technologies. It was also hoped that these studies would define or, at the least, identify better methodologies for technology assessment.

Retrospective Technology Assessment (Continued).

The Carnegie-Mellon conference was directed toward similar issues. It was organized 1) to encourage the development of improved methodologies for technology assessment, and 2) to increase our understanding of the effects of technological change on society and thus to improve present and future US Industrial Commission, a managerial innovation). In addition, there were three papers on the effects of transportation innovations, which dealt with the Erie Canal, the BART system in San Francisco, and airport planning and development. The program also included a paper on communications satellites and one on planning the expansion of electrical generating and transmission systems. Four of the case studies focused on nineteenth century innovations and four on new technologies or their dissemination in the twentieth century.

While there was little disagreement on the importance of the two purposes of the conference, there was some difference of opinion on the validity of the historical case study method for achieving those purposes. This method was implicitly supported in the organization of the conference by its concentration on case studies. It was also the basis for the support for four retrospective technology assessments by the National Science Foundation. Alan L. Porter also addressed this issue, arguing that case studies of past innovations were needed to complement the experimental and quasi-experimental design possible in assessments of contemporary technologies. However, Joshua Moses (National Science Foundation), commenting on the papers at the conclusion of the conference, questioned the applicability of certain of the case studies to contemporary policy issues. More than subject matter was involved in Moses' objections to these studies. He felt that technological assessments must be undertaken from a broader perspective than that afforded by case studies. Rather than building up a data base of information about the impacts of particular technologies, he suggested that future work in the field be directed toward defining the major issues in technology assessment and dealing with car liability to eliminate the uncertainty endemic to long-term forecasting with significant unknown variables.

In general, the case study approach to technology assessment was accepted by conference participants whose disciplinary perspectives emphasized the acquisition of a variety of data from which general patterns of social behavior and response could be determined and was dismissed by participants who were less interested in general patterns of response than in the policy implications of evolving technologies today. Both groups shared similar goals for technology assessment; they differed in their patience on route to achieving them.

The papers of the conference will be published. For details contact Joel Tarr, Program in Technology and Humanitarian, Carnegie-Mellon, Pittsburgh, PA 15213.
BRIDGMAN

In our presentation of Nelson M. Polsby's "Introduction of Robert K. Merton written for the Occasion of his Presidential Address" in the Winter 1977 issue (pp. 15-16), the last three paragraphs of text were inadvertently omitted. The missing paragraphs read as follows:

"As we come together for the first time from our various disciplines and universities and countries to seek the comfort and the stimulation of companionship in the social study of science to which we have individually committed ourselves, perhaps the greatest comfort, the most potent stimulus that we can possess together is the mutual recognition of exemplary work. When such work is available to our eyes, we can rest assured that the purposes for which we come together are not vain purposes, but rather are concretely embodied in the accomplishments of our exemplars.

That, I think, is the special meaning that comes to us tonight as an added dimension to the words Bob Morton is about to share with us. We can look at the landscape he has illuminated for us and recognize it as a goodly portion of the charter grant to our society, the intellectual territory that we, as a scientific community, hereafter intend to hold in trust for our successors and for the cultivation and beneficial use of human beings everywhere.

The sociologist Arthur Stinchcombe once wrote, "Robert K. Merton was a classical writer who ranked with Durkheim, Marx, and Trotsky in my earlier intellectual life. I have been a bit bewildered by his becoming a contemporary as I grow older." Ladies and gentlemen, it is my bewildering, but exhilarating privilege to present to you our contemporary, President Robert K. Merton."

Letter to the Editor

Thank you for devoting a review symposium to my book Knowledge and Social Imagery. I think that having two partisan reviewers, one for and one against, is an excellent idea. There should be more of this. Let us hope that it is the beginning of a new trend. Certainly it was both amusing and instructive to compare the two reviews. Let it be thought that I am withering uncomfortably in the vice-like grip of Prof. Hen-David's logical argumentation. Let me declare at once that for my part I was well pleased with the outcome.

Letter (Continued).

Perhaps, though, I may be permitted one small observation. It seems easy to see why the practitioners of a social science would be impatient with philosophical attacks on them, but Prof. Hen-David is determined to reject a philosophical defense of his field. Interesting isn't it? I think that knowledge and social imagery contains the answer to this puzzle.

David Bloore
University of Edinburgh

Sources of Resistance Among Scientists to Their Classification on the Basis of Specialty

Warren G. Hagstrom
University of Wisconsin, Madison

Accompanying this issue of the 48 Newsletter is a membership questionnaire that, among other things, asks you to classify your three principal research interests. It is reasonable to believe that many members will find serious fault with the classification system used here or with the very idea of so narrowly specifying their research interests. This is suggested by the discussion of the topic produced in the February meeting of the 48 Council. The objections expressed were that most of us have manifold interests--"We are all seriously interested in almost all of the topics on the specialty list"--and that the classification used in the list is flawed, with skepticism expressed that any such list could be satisfactory. While the Council in not necessarily representative in a statistical sense of the membership, including at least two and maybe eight Renaissance persons, it is likely that many in a Society such as ours will share these objections; those interested in the social studies of science are almost necessarily persons of broad interests and skills. Nevertheless, the consensus of the Council--those with late-scheduled departures--was that knowledge of major specialties would be of sufficient value to the Society, neophytes in the area, and the larger community, to warrant inclusion on the questionnaire.

Such a resistance to classification is quite general among scientists, as those of us who have attempted to get scientists to classify their research interests have found very well. In my interviews with scientists I have often had to probe deeply to get them to indicate their major specialties, and the problem was compounded in surveys when I asked respondents to select major interests from a list of categories. Whence this resistance? Why should individuals resist self-classification, when in fact most succeed in doing so in questionnaire surveys, and when outside observers ordinarily have little difficulty in placing

#Anachronism intentional: While during the Renaissance "Renaissance" men were (almost?) entirely men, today--those few there are--"Renaissance persons" may be of either gender.
First, his specialty is a central aspect of the identity of each scientist. Specifying a specialty interest is making a claim about who one is, a claim others may not recognize. More important, it may be seen as an admission of what one is not (not "primarily," or not "among the top three") interests. Scientists tend to be committed to the view that all or much of science is "unified," that work in one area has implications for work in many other areas; it is in the interests of a scientist to have his work perceived as having very general implications. Being forced to select a limited number of specialties can be perceived as abandoning such claims. Thus, isn't it obvious that research on competition in science is part of such specialties as stratification and reward systems, communication processes, career patterns, the normative structure of science, productivity of scientists, and psychology of scientists ("ambivalence")—among others? Why should I have to choose?

Second, any classification system can be perceived as stating some "official" designation of the status of specialties, and legitimating or de-legitimizing research interests. When, in 1964, the NSF National Register of Scientific & Technical Personnel asked sociologists to classify their research interests, they asked respondents to select interests from a list that excluded any explicit reference to "sociological theory." Self-designated theorists were greatly annoyed and made many protests to the offices of the American Sociological Association. Members of this society know that a decision to classify "sociology of knowledge and science" together rather than as two specialties is a hotly debated matter. Similarly, when the National Research Council's "Woschheimer" report (1965) suggested major revision in the classification of research in chemistry, it implied such social changes as blurring the distinction between inorganic and organic chemistry (a very well-established distinction), and "promoting" theoretical chemistry into a category of its own. Classification systems are properly viewed as having, in the broad sense of the term, political implications. More than half a century ago the British Census of India rashly decided to enumerate castes — rashly because the effect was seen as official governmental recognition of the status of castes and sub-castes, and the attempt stirred widespread public disorder. Our aspirations here are not so great; we view the classification scheme as tentative, to be revised, and as having enough utility to justify the effort. We do not perceive science to be organized along caste lines, nor do we perceive specialty membership as being an ascribed characteristic. We hope not to generate identity crises or communal riots.

COUNCIL MEMBERS AND CHARTER REVISION

There are no nominees for the five vacant positions on Council as explained earlier (see Election of Council Members on page 3). Information on each of the ten, as reported by the Nominations Committee, is given below. After studying this material you should vote for no more than five of the candidates. Please BRACE, EUD, SIAM, STAMP and NAAL (from overseas, airmail) the ballots so as to reach Robert McElwee by 15 JUNE.

Profiles

Key:

a. Present position; b. Principal research interests; c. Two most recent publications

Donald D.B. Weaver (Ph.D. Yale 1966, History of Science)

a. Professor of the History of Science, Williams College
b. Social relations of science, 19th century U.S. science and technology

Jonathan R. Cole (Ph.D. Columbia 1969, Sociology)

a. Associate Professor of Sociology, Columbia University
b. Stratification and reward systems in science
c. Peer Review at the National Science Foundation (with others; NAS-COMOP, May 1977); Social Stratification in Science (with S. Cole, 1975)

A. Hunter Dupree (Ph.D. Harvard 1952, History)

a. Professor of History, Brown University
b. History of American science; history of measurement; social and biological systems

Loren Graham (Ph.D. Columbia 1964, History)

a. Professor of History, Columbia University
b. History of modern science with special reference to the Soviet Union

Michael J. Moravcsik (Ph.D. Cornell 1956, Physics)

a. Professor of Physics and Institute of Theoretical Science, University of Oregon
b. Science in developing nations; measures of scientific productivity; theoretical high energy physics
Profiles (Continued).

Nicholas C. Mullins (Ph.D. Harvard 1967, Sociology)
a. Associate Professor of Sociology, Indiana University; Visiting Fellow, Institute for Advanced Study 1976-77
b. Development of scientific disciplines and specialties; sociological theory

Eugene B. Skolnikoff (Ph.D. MIT 1965, Political Science)
a. Professor of Political Science and Director, Center for International Studies, Massachusetts Institute of Technology
b. Science and government; science and international relations

Henry Small (Ph.D. Wisconsin 1970, History of Science)
a. Researcher, Institute for Scientific Information
b. Development of scientific disciplines and specialties; scientific communication

Patricia K. Woolf (Ph.D. Johns Hopkins 1974, Communications)
a. Visiting Fellow, Department of Sociology, Princeton University
b. Scientific communication; diffusion of information about health care innovations

Dorothy S. Zinberg (Ph.D. Harvard 1966, Sociology)
a. Director of Disparities and Special Projects, Program in Science and International Affairs, Harvard University
b. Career development of scientists; international exchange of scientists

Vote for not more than five of the following by placing an X on the appropriate line.

- Donald DeB. Beaver
- Jonathan R. Cole
- A. Hunter Dupree
- Loren Graham
- Michael J. Morawetz
- Nicholas C. Mullins
- Eugene B. Skolnikoff
- Henry Small
- Patricia K. Woolf
- Dorothy S. Zinberg

Balk for Proposed Amendments to the Charter of the Society

Pursuant to Section VI of the Charter, the following proposed amendments are herewith presented to the membership for vote by mail ballot. The amendments have been approved by the Council and by a majority of those voting at the Business Meeting of the Society in Ithaca on 5 November 1976.

If a majority of those voting on this ballot supports each proposed amendment, the Charter will be revised as indicated.

Proposed Amendment A increases the size of the Council by two members. Proposals B and C revise the quorum rules and periods of election to take into account the increased size of the Council. Proposals D and E provide for two standing committees.

In the following wording, bracketed sections are to be deleted; underlined sections are to be added. Indicate if you favor or oppose each proposed amendment.

A. Section II.B.1
1. The Society has the following elective officers: a president, a secretary-treasurer, and [five] seven other Council members.

B. Section II.B.2
2. [A majority of the] Four voting members of the Council constitutes a quorum.

C. Section II.B.7
7. [Three] Four members of the Council shall be elected in odd-numbered years, [two] Three in even-numbered years.

Add the following after Section II.B.2 and number subsequent sections accordingly:

D. 3. There shall be a standing committee on annual meetings.

E. 4. There shall be a standing committee on publications.
SPECIALIZATION LIST

SCIENCE IN SOCIETY
11. Impact of society on science and technology
12. Social impact of science and technology
13. Public understanding and evaluation of science
14. Science education
15. Science policy
16. Science, technology and public policy
17. Technology assessment
18. Science in developing countries
19. Other (specify)

SCIENCE IN HISTORY
21. Science as a cultural mode
22. Development of technology
23. Science-technology relationships
24. Scientific and technical societies
25. Development of disciplines
26. Development of professions
27. University science
28. National groupings
29. Other (specify)

ORGANIZATION OF SCIENCE
31. Social backgrounds, mobility and manpower
32. Stratification and reward systems
33. Communication processes
34. Bibliometrics
35. Economics of research and development
36. Sociology of specialties and disciplines
37. Sociology of science, general
38. Sociology of technology
39. Other (specify)

SPECIAL STUDIES OF SCIENCE, not elsewhere classified
41. Personality of scientists
42. Creativity studies
43. Psychology of science, general
44. Ethnic science
45. Philosophy of science
46. Ethics of scientific research
47. Social studies of science, general
48. Science indicators
49. Other (specify)

FORTHCOMING MEETINGS

ASA. The annual meeting of the American Sociological Association will be held 5-9 September 1977 in Chicago. Two sociology of science sessions have been scheduled by organizer and presider Maurice N. Richter, SUNY-Albany:

Sociology of Science: Scientific Careers

1. "Scientific Productivity, Sex, and Location in the Institution of Science"
   Barbara F. Rosen (Indiana University)
2. "The Effect of Cumulative Advantage on Inequality in Science"
   Paul D. Allison and Tad K. Krauze (Cornell University)
3. "A Network Analysis of Departmental Prestige Based on the Origins of Faculty Degrees"
   John M. Sharp, Bui Hang Shin, and Leroy P. Smith (University of North Carolina)
4. "Institutional Status and Publication Rates in Professional Journals"
   Susanne Praschke (Governors State University) and Mihaly Cziksentmihalyi (University of Chicago)
5. "Improving Measures of Scientific Contributions to Knowledge"
   Duncan Lindsey (Washington University)
6A. Sociology of Science: Functioning of the Scientific Community

1. "The Place of Knowledge in Scientific Growth: A Confluence Theory" by Kenneth E. Stabler (Cornell University) and Daryl E. Chubin (University of Pennsylvania)

2. "Science and Social Intelligence About Anomalies: The Case of Weasels" by Ron Westrum (Eastern Michigan University)

3. "Generational Differences in Scientists' Research Interests" by Thomas F. Giorn (Columbia University)

4. "Adjudication in Science: The Lactellate Controversy" by James C. Peterson and Gerald E. Markle (Western Michigan University)

5. Discussant: Pal F. Nestvito (Reimschess Polytechnic Institute)

6B. The summer meeting of the British Society for the History of Science will be held at the National Maritime Museum at Greenwich, England, 22-24 August 1977. The meeting will take the form of a Symposium on Scientific Instruments: Their Social and Economic Settings. Normal sessions will cover, among other things, Objects as Evidence, Theory and Practice, the Development of the Accuracy of Measurement, the Economics of Production, Social Attitudes, and Iconography. For further information, contact the Organizing Secretary, Department of Navigation and Astronomy, National Maritime Museum, Greenwich, London SE10 9NN, England.

6H. The Board of the International Sociological Association's Research Committee on the Sociology of Science has decided that the next meeting of this committee will be held in Budapest on 7-9 September 1977. The meeting will take the form of a conference. The Board has accepted the offer of the Institute of Sociology and the Research Group for Science Organization of the Hungarian Academy of Sciences to act as host and organiser of the meeting. The aim of the conference is to consider the relations between scientific research and the social processes of science. Participants are invited to present papers on topics related to the sociology of research processes and the social context of science. The conference will be divided into sessions on the following topics:

- The social context of scientific research
- The role of scientists in society
- The impact of science on society

Participants are encouraged to submit abstracts of their papers by 30 April 1977. Further details will be provided by the organizing committee.

6R. The XVIIth International Congress of the History of Science will be held 10-19 August 1977 in Edinburgh under the auspices of the International Union of the History and Philosophy of Science and sponsored by UMICO. The theme of the Congress is "Human Implications of Scientific Advance—Historical Perspectives." Among the symposia will be:

1. Science and Human Values
   Among the important facets of this broad problem which will be explored are the questions of how science has functioned as a cultural symbol within European civilization, and how styles of scientific work vary among civilizations even to the extent of becoming keys to their identity. Speakers include: G. Gilleland (USA), J. Salomon (France)

2. Internal and External Causes of Scientific Ideas
   Case studies will be used to show how theoretical ideas not determined by the empirical logic of science itself, can be related to biographical, philosophical, social, and political sources. The examination of such interactions between the so-called 'internal' and 'external' aspects of history of science should help to clarify the nature of this subject and its relationship to general history. Speakers include: F. Borski (Italy), A. Tumock (USA), G. Krober (USA), P. F. Forman (USA), B. Tukuls (USA), H. Bon-net (France)

3. International Cooperation and Diffusion in Science
   The initial concern of this symposium will be with international cooperation and organization of science, particularly during the eighteenth and nineteenth centuries. A subsequent theme for discussion will be national differences in the patterns of international cooperation such as, for example, the diffusion of European science.

Speakers include: K. Rierman (IEEE), M. Bronson (UK), B. Schroeder-Guthaus (Canada), H. Reinegold (USA), M. Yoroshabeck (USA), M. Watanabe (Japan)

A. Problems of Source Materials in the History of Science
   This symposium will survey the work being done in France, the USA, Great Britain, the USA, etc., to locate and preserve the written records of scientists and technologists of both past and present times. The effectiveness of such efforts will be evaluated in terms of their usefulness for stimulating new scientific scholarship, particularly with regard to the history of twentieth century science, will be critically assessed. Speakers include: C. B.颈asian (France), Margaret Cawing (UK)

B. Weiner (USA), A. Hanson (USA)

5. Classification and Systematization in the Sciences
   The aim of this interdisciplinary symposium is to bring together historians and philosophers of different scientific disciplines who have an interest in general problems of classification—not restrictively biological classification, but who are usually separated by the traditional boundaries between sciences such as biology, medicine, chemistry, etc.

Speakers include: W. Albary (Australia), P. Blom (USA)

Information on the IUMIC Congress may be obtained from the Congress Secretary, Eric J. Forbes, Royal Society of Edinburgh, 22 George Street, Edinburgh, Scotland EH2 2PQ.
Research in Progress

NSF Projects.

AIP. The NSF Program in the History and Philosophy of Science and the NERI Division of Research Tools have jointly funded a three-year project to identify sources for research on the history of modern biochemistry and molecular biology under the direction of John T. Ebell, professor emeritus of Harvard University, and William J. Bell, Jr., librarian of the American Philosophical Society. The project, conducted at the American Philosophical Society Library, reports on work in a three-part series of three newsletters: the Survey of Sources, which contains lists of sources, and a survey of the contents of the "Survey" was drawn.

The principal goal of the Survey of Sources for the History of Biochemistry and Molecular Biology is to attract scholars from a variety of disciplines to study various aspects of the development of these sciences in the past one hundred years. To be of value to these scholars, the Survey of Sources must draw their attention to the primary and secondary source materials which will enrich their reports. The Survey must, therefore, be equipped to keep track of thousands of bibliographic references and to control information related to the contents of hundreds of personal and institutional archival collections.

To furnish researchers with a bibliography relevant to their personal research topics, these references must be sufficiently detailed in their listing of such categories as personal names, dates, and subject matter of research to permit linking of categories of evidence. Furthermore, the researchers will wish to know something about the institutions, individuals, associations, publications, awards, research and teaching activities, and patronage which have shaped biochemical and molecular biology in specific national, institutional or intellectual contexts over the past one hundred years. Therefore we would hope to be able to locate scientists and their work in chronological context, in their institutional framework, in relation to colleagues and students who compose the peer community, and in the context of available documentation.

It is hoped that—if the Survey of Sources can successfully manage these data—researchers will discover suggestive relationships in the history of ideas and the broader cultural context, which will be susceptible to verification through analysis of linked source materials. If such expectations are fully met, many users besides historians should find the retrospective data base in biochemistry and molecular biology of considerable interest. Sociologists of science, philosophers, psychologists, as well as anthropologists, general historians, should be able to explore the data from their own perspectives and with the aid of distinctive methodologies.

For details about the Survey or access to this file, please contact David Beeman, Secretary to the Committee, American Philosophical Society Library, 105 South Fifth Street, Philadelphia, PA 19106.

Brass. Paul R. Brass (University of Washington, Seattle, WA 98195) has begun an NSF-supported case study to extract, explore, and analyze some of the value assumptions and implications surrounding the transfer of innovative rice IR-8 technology from the U.S. to South Asia. The approaches of anthropology, history, philosophy, political science, and sociology of science will be used to develop and compare composite value profiles of: 1) U.S. rice science and technology institutions, 2) interna-

Brass (continued).
White and Sullivan. In "Collaborative Research on A Social Analysis of A Scientific Specialty: The Physics of Weak Interactions," D. Myzel White (Cornell University, Ithaca, NY 14853) and K. William Sullivan (University of Maryland, Baltimore K3057) are continuing their sociological and historical study of a specialty in elementary particle physics. The project is moving from a phase where almost all of their effort was devoted to designing and creating a large, complex data base to a phase of initial exploration of these data for a range of analyses. With this data base, they are investigating (1) the interdependence of theory and experiment; (2) the specialization of scientists into theoretical, phenomenological and experimental roles; (3) the consequences of technological specification among specialists; and (4) the changing intellectual dependence of the specialty on other areas of high energy physics.

Other Projects and Research Opportunities:

AIP. The American Institute of Physics' Center for History of Physics has served historians and sociologists of science and others for over ten years. Resources include (1) interviews with over 300 scientists covering all aspects of their careers; many of the interviews are subject/indexed. The Center has been the depository of choice for a number of historical and sociological projects, not only by physicists, but covering all the natural sciences; (ii) the National Catalog of Sources for History of Physics and Astronomy containing detailed inventories of holdings of scientists' papers at repositories throughout the United States and abroad; (iii) archives including papers of individuals and societies, manuscript autographivers, histories of physics departments, etc.; (iv) a newsletter, free upon request, with information about recent deposits of papers, current activity in the history of the physical sciences; (v) books covering the entire history of modern physics (8000 volumes) available by personal or interlibrary loan; and (vi) audio-visual materials including 400 tapes and 20,000 photographs available for research or educational use. For information on other and other resources contact Spencer Weart, Director, Center for History of Physics, American Institute of Physics, 4 Syntex Drive, New York, NY 10017.

Also at the AIP is the Manpower Statistics Division which regularly surveys the education and employment of physicists and astronomers, relying on questionnaires and a large data base, in part computerized, extending back to the early 1960s. A number of reports are published each year covering changing patterns of physics enrollments and degrees at all levels, areas of specialization, post-graduation plans, use of physics training in initial employment, etc. Reports and unpublished data are also available from an extensive demographic and employment survey of the entire physics community. Special current studies focus on career paths of physicists changing or leaving academic institutions, the data to be available in the fall of 1977. For further information contact Mary Porter, Director, Manpower Statistics Division, American Institute of Physics, at the address above.

CSAC. The Contemporary Scientific Archives Centre reports that its three-year existence has been extended through the support of the Royal Society and the Council of Engineering Institutions of the United Kingdom. The Centre continues to host the visits of librarians, archivists, and historians of science, all of whom are invited to utilize the deposits or participate in the collection of materials by several notable natural scientists. For further information contact the Centre's Director, Margaret Cavigill, at 10 Keble Road, Oxford OX1 3QI, England.
Science, Technology, and Society, A Cross-Disciplinary Perspective. An important new work in science policy studies, Science, Technology, and Society, is an important step in the International organization of scholars in several social science disciplines who share an interest in examining the social and policy dimensions of science and technology. This volume presents specially commissioned studies of particular subject and methodological approaches which together form a crucial framework for future research and debate in this interdisciplinary, international field. The book is edited by Ina Spiegel-Röhe and Derek de Solla Price, under the auspice of the International Council for Science Policy Studies. It will be published in May 1977 (approx. 650 pp) by Sage Publications, Inc., 273 South Beverly Drive, Beverly Hills, CA 90212. The cost until August 1977 is $25. The contents are as follows:

Preface

PART I: The Normative and Professional Context

The Study of Science, Technology and Society

(Govt.: Recent Trends and Future Challenges)

Ina Spiegel-Röhe

Science Policy Studies and the Development of Science Policy: Jean-Jacques Salamon

Criticism of Science: J. R. Ravetz

PART II: Social Studies of Science: The Disciplinary Perspectives

Sociology of the Scientific Research Community

M. J. McElroy

Changing Perspectives in the Social History of Science

R. M. Macleod

Economics of Research and Development

F. N. Layton

Psychology of Science

Christopher Freeman

Models for the Development of Science

H. J. Winsberg

PART III: Science Policy Studies: The Policy Perspective

Scientists, Technologists and Political Power

J. A. Jackoff

Technology and Public Policy

D. L. Kessel

Science, Technology and Military Policy

Harvey M. Salopky

Science, Technology and Foreign Policy

Brigitte Schoen-Oxlad

Science, Technology and the International System

Ruggero Polidoro

Science Policy and Developing Countries

Z. Buerger and Doris G. Roesser-Owen

Sociology of Science. A Yearbook. In an annual publication that will bring together articles around particular themes in the sociology of the sciences as a means of contributing to the development of a comparative, cross-disciplinary understanding of the sciences. By publishing research from a number of perspectives and approaches on a specific topic, the Yearbook will provide an
opportunity for the integration of different disciplinary strategies and their
interrelated development. The term sociology in the title is thus meant
broadly, including historical and philosophical dimensions, and does not
refer to a narrow, professionalised conception of the field. Comparisons across
cultures and historical periods will be a major feature of the Yearbook, as will
analyses of the institutionalisation of scientific knowledge as distinct cogni-
tive structures, and their relations with other forms of understanding institu-
tionalised in different societies. Volume I (1977, 285 pp.), entitled "The
Social Production of Scientific Knowledge," is edited by R. Wemmelhoven, P.
Weingart and R. D. Whiteley. It will appear Spring 1977, published by D. Reidel
Publishing Company, Inc., Lincoln Building, 160 Old Derby Street,ingham, MA
02933, U.S.A. Send $82.50 for cloth and $12.95 for paper. The contents of
Volume I are:

Editorial Statement
The Institutionalisation of the Sciences: Changing Concepts
and Approaches in the History and Sociology of Science.
The Social Construction of Science: Institutionalisation and Definition of
Positive Science in the Latter Half of the
Seventeenth Century: Wolfgang van den Haak.
Problems of a Historical Study of the Sciences:
Scientific Ideology and Scientific Process:
The Natural History of a Conceptual Shift: Roger G. Krohn.
Social Relations of Cognitive Structures in the Sciences:
Ontological and Epistemological Commitments and
Social Relations in the Sciences: Phyllis Colvin.
Cognitive Norms, Knowledge-Interests and
the Constitution of the Scientific Object: A Case Study in the Functioning of Rules
for Experimentation: Gerald Holme.
Changes in the Social and Intellectual
Organisation of the Sciences: Professionalisation and the Arithmetical
Ideal: Richard Whitley.
What Does a Proof Do If It Does Not Prove?
A Study of the Social Conditions and
Metaphysical Divisions Leading to
David Bohm and John von Neumann Failing
to Communicate in Quantum Physics: Trevor Pinch.
Social Goals, Political Programmes and Scientific Norms:
The Political Direction of Scientific Development: Wolf Krohn, Wolfgang
van den Haak, Peter
Weingart.
Scientific Purity and Nuclear Danger: the Case
of Risk Assessment:
Creation vs. Evolution: The Politics of Science
Education: Helga Novotny, Dorothy Nelkin.

Toward A Metric of Science. Essays Occasioned by the Advent of Science Indicators.
The decision of the National Science Board to institute a biennial series of
"Science Indicators" reports made abundantly plain the need for basic improvement
in the measurement of science. The aim of Toward A Metric of Science is to begin
laying part of the groundwork, and the specific techniques, for such improvement
by providing critical discussion of science indicators, as concept and as practice
- a discussion involving historians, sociologists, political scientists and economists of science; physical, life and social scientists themselves; and
experts drawn from the uncoordinated science-indicators movement. The editors thus
wrote in the hope that others will join in this volume an invitation to serious
thought on the metric of science, and the stimulus to providing more developed
understandings than the field yet affords. Toward A Metric of Science is edited by
Yeates Ahern, Joshua Lederman, Robert K. Merton, Arnold Thackray and Harriet
Zuckerman. It will be published in Fall 1977 by Wiley-Interscience Publications,
605 Third Avenue, New York, NY 10016. The contents are as follows:

Preface
PART I. Orientations
Measurement in the Historiography of Science
Science Indicators and Social Indicators
Can Science Be Measured?
Toward a Model for Science Indicators
Models of Scientific Output

PART II. Particulars
Precedents Foundations of Social Data
Economic Problems of Measuring Returns on
Research
Citation Data on Science Indicators

Measuring the Cognitive State of Scientific
Disciplines

Difficulties in Indicator Construction:
Notes and Queries

PART III. Contents
From Parameters to Portraits -- and Back
Political Contexts of Science Indicators

Journals, Newsletters and Guides.

BJSB: The British Journal for the History of Science is published three
yearly. Editor Nicholas Fisher invites the submission of sociological
analyses. He also reports that the 7th British Society for the History of Science
List of conferences is now available free to members (£1 or £3
to non-members). It may be obtained from the Administrator, BJSB, Halfpenny
House, Mill Lane, Chalfont St. Giles, Buckinghamshire HP6 6HR, England.
Recent Publications.

Librano, Linda L. Librano has just authored Soviet Sociology of Science, the first monograph in English that reviews the sociological research in the USSR. New Soviet literature examined in the monograph treats science as a form of social behavior and focuses on the relationships between science and society. This monograph outlines the research in terms of the interaction between social conditions and the individual characteristics of the scientist. The notion of science as a social institution has led the Soviet sociologists to pay particular attention to the social impact of the scientific-technical revolution as well as to questions of organization and management of scientific activity. Librano examines these questions in a detailed and systematic fashion. The sociology of science, as viewed by the Soviets, is part of a broader field of inquiry, nanotechnology, which studies science from a variety of disciplinary perspectives. Accordingly, the monograph opens with an assessment of nanotechnology as an academic field and a description of the key institutions engaged in nanotechnology since the mid-1960s. A selected bibliography of Soviet sources is included. Send orders (the price is $4.95) to Librano, Linda L., 110 West 15th Avenue, Columbus, OH 43210.

Perspectives. Beginning in 1973, Project PAREx has sponsored a series of interdisciplinary, comparative and international studies in the history and sociology of scientific development. Our important focus of research has been the concept of the scientific specialty, discipline or network -- the principal means of organizing inquiry which, since the turn of the nineteenth century, has provided the intellectual and institutional orientation for scientific research. Perspectives on the Emergence of Scientific Disciplines, edited for Project PAREx by Gerard Manheim, Roy MacLeod, Michael Mulkey, and Peter Weingart, is (Chicago: Aldine, 1977, 222 pp., $22.50) attempts to outline a research program in this area, building upon a series of historical and sociological interpretations and offering a set of methodological guidelines. The volume includes:

N. Froben & W. Schafer
The Origins and Structure of Agricultural Chemistry

P. Corrabel
Du Centenaire d'une Discipline Nouvelle: La Thermodynamique

R. G. A. Dobby
The Case of Physical Chemistry

M. Worboys
The Emergence of Tropical Medicine: A Study in the Establishment of a Scientific Specialty

J. D. de Certalines
La Biophysique en France: Critique de la Notion de Discipline Scientifique

J. Law
The Development of Specialties in Science: The Case of X-ray Protein Crystallography

M. J. Mulkey & D. O. Rag
Cognitive, Technical and Social Change in the Growth of Radio Astronomy

G. N. Gilbert
The Development of Science and Scientific Knowledge: The Case of Radio Meteor Research
Methodology in the Sociology of Science: Some Reflections on the Study of Radio Astronomy

Theories and Methods in the Sociology of Science: An Interpretative Approach

The Identification and Definition of Scientific Collectivities

Resistance and Receptivity of Science to External Direction: The Emergence of New Disciplines Under the Impact of Science Policy

Recent Publications (A-M):


Recent Publications (Continued):


Recent Publications (Continued).


36. Jevons, P.R., "The interaction of science and technology today, or, Is Science the Mother of Invention?" Technology and Culture 17 (October 1976): 729-742.


This list will be continuing in the summer issue of the 4S Newsletter.